

Amendments to the Claims:

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) Circuit arrangement for driving a display arrangement, the circuit arrangement includes column driving means for driving n column electrodes and row driving means for driving m row electrodes of the display arrangement, wherein the column driving means comprises n output channels, each output channel having a column electrode assigned and is arranged for providing a respective column voltage to the assigned column electrode, an additional output channel is arranged for providing respective column voltages, whereas each of the n column electrodes is connectable to the additional output channel, the additional output channel thereby replacing a respective one of the n output channels which the column electrode is assigned to,

characterized in that the circuit arrangement is controlled in use such that at the beginning of driving a first row electrode of a frame, the additional output channel is calibrated, wherein during driving the following row electrodes the additional output channel is successively connected via the respective switching means to the column electrodes, wherein the associated output channel of the column electrode currently connected to the additional output channel is disconnected from the respective column electrode for calibrating, while the remainder of the output channels are connected to their respective column electrodes.

2. (Previously Amended) Circuit arrangement as claimed in claim 1, wherein the n output channels having switching means, each of the n switching means is provided between an output channel and its associated column electrode for connecting the column electrode with the additional output channel.

3. (Previously Amended) Circuit arrangement as claimed in claim 2, wherein the switching means are provided for disconnecting the output channel from its column electrode, if the column electrode is connected to the additional output channel.

4. (Previously Amended) Circuit arrangement as claimed in claim 1, wherein at the beginning of driving a first row electrode of a frame the additional output channel is calibrated, whereas during driving the following row electrodes the additional output channel is successively connected via the respective switching means to the column electrodes, whereas the associated output channel of the column electrode currently connected to the additional output channel is disconnected from the respective column electrode for calibrating.

5. (Previously Amended) Circuit arrangement as claimed in claim 1, wherein the column driving means comprises more than one additional output channel which are connectable to the column electrode.

6. (Previously Amended) Circuit arrangement as claimed in claim 1, wherein calibration means are arranged for offset cancellation of the output channels connected to the calibration means.

7. (Currently Amended) Display device comprising
a display arrangement and a display driver circuit arrangement,
the display driver circuit arrangement comprises column driving means for driving the n column electrodes with column voltages and row driving means for driving the m row electrodes with row selection voltages, wherein the column driving means comprises n output channels, each output channel having a column electrode assigned and is arranged for providing a respective column voltage to the assigned column electrode, an additional output channel is arranged for providing a column voltage, whereas each of the n column electrodes is connectable to the additional output channel; and

means for driving a first row electrode while the additional output channel is calibrated, and for driving a plurality of row electrodes, one at a time in sequence, while connecting the additional output channel to a plurality of column electrodes, one at a time in sequence, and for calibrating the output channel corresponding to the connected column electrode, while the remainder of the output channels are connected to their respective column electrodes.

8. (Previously Amended) Display device as claimed in claim 7, wherein the display arrangement comprises a liquid crystal material between a first substrate provided with row electrodes and a second substrate provided with column electrodes, in which overlapping parts of the row and column electrodes define pixels.

9. (Cancelled)

10. (Currently Amended) A method of operating a display device having a first plurality of column electrodes and a second plurality of row electrodes, arranged in a matrix, and a third plurality of output channels, with at least one column electrode having a corresponding output channel, but with at least one output channel having no corresponding column electrode, and a fourth plurality of switches each of said switches for connecting one of said third plurality of output channels to one of said first plurality of column electrodes, wherein said method comprising:

a) calibrating one of said third plurality of output channels having no corresponding output channel;

b) connecting said calibrated output channel to a first column electrode through one of said fourth plurality of switches; ~~and~~

c) simultaneous with the connecting step (b), calibrating a first output channel corresponding to the first column electrode, while disconnected from said first column electrode;
and

d) simultaneous with the connecting step (b) connecting other output channels to their respective column electrodes.

11. (Currently Amended) The method of claim 10 further comprising:

~~d)~~e) disconnecting said calibrated output channel from the first column electrode;

~~e)~~f) connecting said first output channel to the first column electrode through one of said fourth plurality of switches;

~~f~~g) connecting said calibrated output channel to a second column electrode through one of said fourth plurality of switches; ~~and~~

~~g~~h) simultaneous with the connecting step (f), calibrating a second ~~first~~ output channel corresponding to the second column electrode, while disconnected from said second column electrode

i) simultaneous with the connecting step (f) connecting other output channels to their respective column electrodes.

12. (Currently Amended) The method of claim 11 further comprising:

Continuing the steps of ~~(de)~~ – ~~(gi)~~ for each calibrated output channel and for connecting and calibrating another output channel for each of third plurality of output channels,